



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,061	11/02/2001	Coen Theodorus Hubertus Fransiscus Liedenbaum	NL 000590	4835

24737 7590 06/13/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

WU, XIAO MIN

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/003,061	Applicant(s) LIEDENBAUM, COEN THEODORUS HUBERTUS FRA	
	Examiner XIAO M. WU	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7,8,10,11 and 17-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7,8,10,11 and 17-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/31/2006 has been entered.

2.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 7-8, 10-11, 17-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The limitation of "photoluminescent material" is not described in the specification. The specification only describes a thin layer 7 of fluorescent material, e.g. fluorescent polymer, a dye or an inorganic compound like a phosphor, and a source for generating electromagnetic radiation, here for example a UV source 11, is used to induce excitations, so called excitations, in

Art Unit: 2629

the layer 7 of fluorescent material (see page 1, line 26 to page 4). The specification does not describe the fluorescent material is a photoluminescent material.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 25-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 25, line 1, the recitation of "claim 25" is indefinite since claim 25 can not depends on itself.

Claims 26-27 are indefinite since they depend from the indefinite claim 25.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 7- 8, 10-11, 18, 20-23, 25-26 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martel (US Patent No. 3,344,280) in view of Moricca (US Patent No. 3,988,536).

As to claim 10, Martel discloses a display device (Fig. 1) having pixel elements (e.g. each point on the electro luminescent layers (14 and 16) each including a photoluminescent material

Art Unit: 2629

(14, 16) for emitting light when excited by light source (24), first and second electrodes (12, 18) disposed on opposite sides of the photoluminescent material (14, 16) from each other, the electrode adapted to apply a modulating voltage (22) across the photoluminescent material. It is noted that Martel does not disclose means for converting a display signal to the modulating voltage and for applying the modulating voltage to the electrode to modulate an intensity of the light emitted by the photoluminescent material. Moricca is cited to teach electroluminescent display device similar to Martel. As shown in Figs. 1 and 2, Moricca discloses means for converting a display signal (e.g. TV signal, see col. (col. 3, lines 21-22) to the modulating voltage and for applying the modulating voltage to the electrodes to modulate an intensity of the light emitting by the electrode-luminescent material (see col. 3, lines 1-55). It would have been obvious to one of ordinary skill in the art to have modified Martel with the features of the modulation voltage applying the pixel based on the video signal as taught by Moricca because Moricca provides a video display which can display TV signals.

As to claim 7, Martel discloses the electrodes (12, 18) are transparent electrodes.

As to claim 8, it is noted that Martel does not specifically disclose what is the thickness of a layer of luminescent material and what is the electric field strength applied to the electrodes. However, the thickness of the layer of luminescent material and the electric field strength are considered as an obvious design choice since the impedance of the luminescent material are varied based on the thickness and the electric field. Therefore, a proper thickness and electric field can be selected based on what kind of the compound of the luminescent material is used.

As to claims 11, 28, Martel discloses the photoluminescent material comprises phosphor (col. 3, lines 67).

As to claim 18, Moricca discloses the electrodes are arranged in a matrix, where the first electrodes of the pixels are arranged in rows and the second electrodes of the pixels are arranged in columns (see Fig. 1).

As to claims 20-21, 25-26, Martel discloses a light source (24) which is a ultra-violet light source.

As to claims 22, 29, Martel discloses that the photoluminescent material is adapted to decrease the intensity of light which it emits in response to an increase the modulating voltage applied across the photoluminescent material by the electrode (see col. 4, lines 7-47).

As to claim 23, Martel discloses a display apparatus, comprising: a display device including a fluorescent layer (14, 16) adapted to emit light when excited by a light source (24), first and second electrode layers (12, 18) and wherein the first layer (12) is disposed on the first side of the fluorescent layer (14, 16) and the second electrode layer (18) is disposed on a second side of the fluorescent layer opposite the first side. It is noted that Martel does not specifically disclose that the first and second electrode includes a plurality of rows and column electrode and does not specifically means for converting a display signal to a modulating voltage and for applying the modulating voltage to the electrodes to modulate an intensity of the light emitted by the fluorescent layer. Moricca is cited to teach electroluminescent display device similar to Mattel. As shown in Figs. 1 and 2, the electrodes are arranged in a matrix, where the first electrodes of the pixels are arranged in rows and the second electrodes of the pixels are arranged in columns (see Fig. 1). Furthermore, Moricca discloses means for converting a display signal (e.g. TV signal, see col. (col. 3, lines 21-22) to the modulating voltage and for applying the modulating voltage to the electrodes to modulate an intensity of the light emitting by the

Art Unit: 2629

electrode-luminescent material (see col. 3, lines 1-55). It would have been obvious to one of ordinary skill in the art to have modified Martel with the features of the modulation voltage applying the pixel based on the video signal as taught by Moricca because Moricca provides a video display which can display TV signals.

7. Claims 17 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martel (US Patent No. 3,344,280) in view of Moricca (US Patent No. 3,988,536) as applied to claims 7- 8, 10-11, 18-26 and 28-29 above, and further in view of Zhang et al. (US Patent No. 5,798,170).

As to claim 17 and 27, it is noted that Martel and Moricca does not specifically disclose that the luminescent material comprises a poly phenylene Vinylene (PPV) derivative. However, using a poly phenylene Vinylene (PPV) derivative as the luminescent material is well known in the art such as taught by Zhang (col. 7, lines 8-11). It would have been obvious to one of ordinary skill in the art to have modified Martel as modified with the features of the PPV as taught by Zhang because the PPV material can perform the same function as the luminescent material.

8. Claims 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martel (US Patent No. 3,344,280) in view of Moricca (US Patent No. 3,988,536) as applied to claims 7- 8, 10-11, 18-26 and 28-29 above, and further in view of Nagami (US Patent No. 6,037,718).

As to claims 19 and 24, it is noted that both Martel and Moricca do not disclose each pixel includes a transistor for addressing the corresponding pixel, and a hold capacitor. It is well known in the art that the active matrix flat panel such as LCD EL or OLED includes a transistor for addressing the corresponding pixel, and a hold capacitor such as taught by Nagami (see Fig. 4). It would have been obvious to one of ordinary skill in the art to have modified the flat panel

Art Unit: 2629

of Martel as modified into a active matrix type flat panel so as to activate each pixel through a switch element more precisely.

Response to Arguments

9. Applicant's arguments with respect to claims 7-8, 10-11, 17-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The US 3,264,479, 4,533,215, 4,672,014, 5,221,980, 6,133,894, 6,660,473 are cited to teach a display excited by a light source

Any inquiry concerning this communication or earlier communications from the examiner should be directed to XIAO M. WU whose telephone number is 571-272-7761. The examiner can normally be reached on 6:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHARD HJERPE, can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2629

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

x.w.

June 9, 2006

A handwritten signature in black ink, appearing to read 'Xiao M. Wu', is positioned above the printed name.

XIAO M. WU
Primary Examiner
Art Unit 2629